

MANAGEMENT AUDIT
of the

DEPARTMENT OF RECREATION AND PARKS
DESIGN & CONSTRUCTION PROCESSES

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Keith Comrie
City Administrative Officer

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April, 1981



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Very truly yours,

K. Conrad
K. Conrad
City Administrator

City Administrator

CC-200-000000

One copy of this report was made available to the
Department of Public Works, Department of
Transportation and Traffic
Department of Health and Welfare
Commissioners
Bureau of Public Works Administration

CITY OF LOS ANGELES

CALIFORNIA

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TOM BRADLEY
MAYOR

April 15, 1981

The Honorable Council of the
City of Los Angeles

The Honorable Tom Bradley
Mayor of the City of Los Angeles

Transmitted herewith is the report on the Management Audit of the design and construction processes for capital projects in the Department of Recreation and Parks. The Audit was initiated as a result of a letter from the Governmental Operations Committee dated December 22, 1980 requesting that we review the step-by-step process of the design and construction functions and make recommendations to expedite the procedures. The Committee proposed to consider the report at its April 15, 1981 meeting.

The Committee subsequently requested that a similar audit of the municipal facilities design and construction functions performed by the City Engineer be conducted. It was requested that this second study be returned to the Committee by July 1, 1981. This effort will be combined with a full management audit of the Bureau of Engineering.

A copy of this report was made available in draft form to the staff of the Department of Recreation and Parks. All comments received were reviewed and we have attempted to address all concerns in this final report.

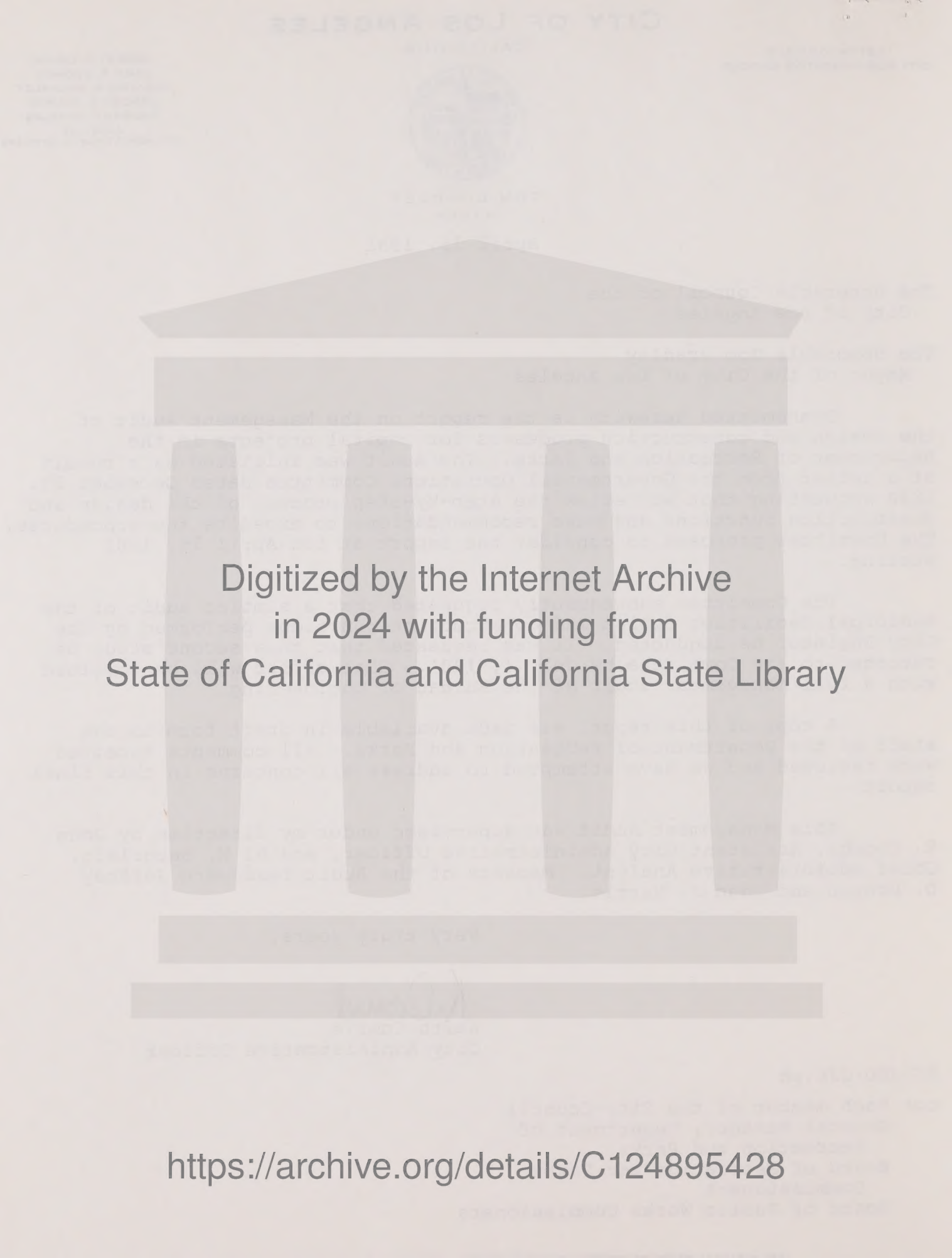
This Management Audit was supervised under my direction by John R. Coombs, Assistant City Administrative Officer, and Al M. Beuerlein, Chief Administrative Analyst. Members of the Audit Team were Jeffrey D. Druyun and John J. Harris.

Very truly yours,

Keith Comrie
City Administrative Officer

KC:JDD:JJH:ph

cc: Each member of the City Council
General Manager, Department of
Recreation and Parks
Board of Recreation and Parks
Commissioners
Board of Public Works Commissioners



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INTRODUCTION

Request

The magnitude of the capital improvement program of the Department of Recreation and Parks (DRP) over the past six or seven years has been enormous compared to earlier years. Funds from such grant and bond fund programs as the 1974 and 1976 State Bond Funds, the Urban Open Space and Recreation Program, the Housing and Community Development Block Grant, the Public Works Employment Act of 1976, the Land and Water Conservation Fund Program, as well as City funds from the Quimby and the Park and Recreational Sites and Facilities funds, has enabled the Department to undertake an ambitious program totaling over \$100 million and involving 476 projects. The recently approved 1980 State Bond Fund Program will provide the City with another \$12 million for 28 additional projects.

Audit Methodology

The Audit staff first surveyed literature dealing with design of facilities and structures, construction and construction inspection activities, then interviewed managers, project managers, planning specialists, and administrative and accounting personnel in DRP to determine the nature and background of the design and construction process. Subsequently, a comprehensive analysis was conducted of current and completed DRP projects to identify the order and time required to accomplish the various steps. From an evaluation of the actions, decisions, and accomplishments and the time it took for each, potential savings were identified. These were discussed with DRP personnel.

Subsequent to commencing the Audit and at the invitation of the Building Industry Association (through its School Builders and Public Works Council), a "round-table" discussion was held with the general contractor and subcontractor members of that Council. The discussion revealed very serious concerns regarding keeping projects on schedule; preventing delays by expediting the consideration of change orders and the written approval authorizing a change order;

reducing in number the inspectors on City projects (Building and Safety and Bureau of Contract Administration) and thereby reducing the delays due to inspection; and expediting the approval and issuance of progress payments and other terms, conditions, and requirements of City construction contracts. All of the comments and concerns were utilized to focus the Audit on operating problems and how those problems affect the timely completion of DRP projects.

The following narrative discusses a series of issues identified by a qualitative and quantitative evaluation of the entire design and construction process. Many issues discussed are not within the DRP's ability to solve; some are within its control. Because the processes are complicated and tend to overlap, the issues identified are discussed in the general sequence of how a project is developed from the initial idea, to determination of funding source, to land acquisition, design, construction, and project completion.

Additional Studies

The City Council and its various committees have been concerned with recommendations from the Task Force on Workforce Economy and Productivity that suggested consolidation, centralization and/or modernization of municipal facilities as well as the appropriateness of the design and construction standards for such facilities. In accordance with the recommendations appearing in the Chief Legislative Analyst report dated August 14, 1980, to and approved by the Governmental Operations Committee on December 4, 1980, the City Engineer and the Department of Recreation and Parks were requested to address the issues of the appropriateness of current design and construction standards, and recommend changes to insure proper use of new technologies, the use of "life-cycle" costing methodologies, and how to emphasize operational economies. These two agencies were to report back to the Committee in six months (on or about June 22, 1981).

SUMMARY

The focus of this Audit on the step-by-step process of designing and constructing recreational facilities has been to identify delay factors. Construction inflation rates have been running at 1% to 2% per month which quickly erodes the budgeted funds for specific projects. Delays are costly and have required that budgeted funds be augmented or that the scope of projects be reduced. In either case, the City receives less construction for the money than was originally anticipated. Further, delays prevent the timely use of facilities by members of the community.

The Audit confirmed the Department has initiated numerous improvements to make design and construction proceed more rapidly. A thorough examination of the administrative processing of capital projects within the Department, as well as administrative factors external to the Department which impinge upon the process, indicates the most significant potential for improvement lies with the latter. The staff has shortened a project's "critical path" by preparing environmental assessments, zone changes and variance applications, site surveys, architectural interviews and contractual documents in parallel with other steps that must be performed in sequential order. The preparation of standard contracts for architectural and construction work, as well as the adoption of project management techniques, has also reduced delays. No estimate was made of the time savings of these improvements since they were made in a period not covered by our review.

There are presently in effect a number of City administrative controls and approval requirements which bear directly upon the design and construction process. Controls are appropriate and necessary to assure adequate protection of the City's interest and the citizen's tax dollars. However, we believe that existing controls have reached the point of diminishing returns, and are now, in fact, costing the City time and money by delaying the processing of the Department's capital projects. It is clear, and timely to recognize, that comprehensive and absolute risk protection and expeditious completion of capital projects are opposing elements in the equation. The more controls and approval requirements the City

imposes, the more delays result. We believe that modifications to and the elimination of certain administrative controls and approval requirements will expedite the capital improvement process and still maintain adequate protection for the City.

Based on our quantitative and qualitative review of completed projects and some now in the design or construction phase, we believe that additional time and dollar savings can be achieved by: modifying the City's grants procedure by delegating authority to the general manager to execute grant contracts and minor modifications to existing contracts; developing and implementing a long range program to selectively acquire new property for recreation facilities; eliminating the Mayor's and CAO's review of personal services contracts for approved development projects; reusing existing designs and specifications to the maximum feasible extent; instituting a pilot program to determine if Bureau of Contract Administration inspectors could perform both code and quality inspections; and, establishing a project "freeze point" after which elective design changes are not to be made.

The overall process through which DRP projects must travel is long and involved. The process, by its very nature, keeps a project prominently before the Council and the community and tends to make an already lengthy process appear even longer. The Council must approve each grant application, each notice of intent, and authorize execution of each grant contract. Each contract modification must be similarly approved. Should there be a need to acquire new property, and an ordinance of condemnation be necessary, it too must be approved by the Council and the Mayor. As the project moves closer to either design or construction, additional grant or City funds may be required (or, alternatively, the project's scope be reduced) due to inflationary pressures. Additional funds, either direct appropriations or the reallocation of other grant funds, require a new and separate Council and Mayor approval. Questions from community representatives who wonder why their project isn't in construction add to the difficult financing and land acquisition process and help create an inaccurate impression that little is being accomplished.

It is our impression that the staff of the Planning and Development Branch, Department of Recreation and Parks, is genuinely concerned with developing useful and pleasing facilities and making the facilities available as soon as possible. The size and composition of the staff appears to be appropriate in terms of the present workload requirements.

The following recommendations are intended to continue the Department's efforts to expedite the design and construction process. Some of the recommendations and improvements require Mayor and Council approval. Others can be implemented by the Board of Recreation and Parks Commissioners and the Department staff and are so identified.

Due to the wide variety and complexity of projects, it would be meaningless to attempt to quantify the total project time savings arising from the recommendations of this report. We believe that with the implementation of the following recommendations, together with the continuation of the Department's current efforts, significant time and dollar savings can be achieved and projects will be completed as quickly as possible.

RECOMMENDATIONS

Policy

1. That the Mayor and City Council:
 - (a) Modify Ordinance 150,582 (Administrative Code Section 14.7) to give the Mayor and Council the discretion to authorize a general manager to execute a grant agreement on behalf of the City if the approved agreement is substantially the same as that which was previously approved in the grant application; and
 - (b) Authorize a general manager to submit and execute minor grant amendments such as time extensions, changes to the scope of projects resulting from deletions due to higher than anticipated construction costs, and other factors. It is suggested that these be authorized at the time the grant application is approved. (Page 8 and Exhibit I)
2. That the Mayor modify Executive Directive No. 16 and the Council modify its policies (in C.F. 120,044) regarding the review of proposed personal services contracts to enable the Department of Recreation and Parks, when using a standard contract form, to contract for personal services (design, appraisal, or survey) for projects previously approved by the Mayor and City Council without a personal services contract review. (Pages 9-10)
3. That the City Council instruct the City Attorney to present alternatives to current insurance and bond requirements that will be more consistent with generally accepted insurance industry practice. (Page 11)

Administrative

4. That the Department of Recreation and Parks include a statement in the award letter identifying its insurance coordinator (by name and telephone number) suggesting that the contractor or insurance company call before preparing or submitting insurance and bonds to avoid unnecessary complications and project delays. (Page 10)

5. That the Mayor instruct the Director of the Bureau of Contract Administration and the General Manager Recreation and Parks jointly to test the use of a single City inspector for Department of Recreation and Parks construction projects (rather than inspectors from Building and Safety and others from the Bureau of Contract Administration); and submit a report to him covering the results of the test and related conclusions. (Page 11)
6. That the Department of Recreation and Parks prepare a land acquisition program for selected projects which will involve multiple parcels, and proceed with the acquisition on such projects as soon as possible. (Page 13)
7. That the Board of Recreation and Parks Commissioners establish as a matter of policy that, as far as reasonable and practical, the Department will:
 - (a) Reuse the plans and specifications for its buildings and facilities; and
 - (b) Determine a "freeze point" in the design process after which elective changes should not be made. (Page 14)
8. That the staff and the Board of Commissioners of the Department of Recreation and Parks:
 - (a) Assess liquidated damages whenever a general contractor fails to meet the time constraints in a construction contract (as modified by authorized change order);
 - (b) Consider not awarding new construction contracts to general contractors who have a history of late completions. (Page 16)
9. That Department of Recreation and Parks project managers routinely present inspection related problems to inspection managers or plan checkers in the Department of Building and Safety whenever it is believed that inappropriate code interpretations are being made. (Page 18)

OVERVIEW OF THE PROCESS

The process of planning, designing and constructing Recreation and Park facilities is complicated. It includes developing the project plan or idea; finding funds (normally special grants such as the Housing and Community Development Block Grant and various State bond funds, or funds for the specific use of the Department of Recreation and Parks (DRP) such as the Quimby Fund and the Sites and Facilities Fund); assuring that the project design and scope will meet the requirements of the grant; finding matching funds if required; acquiring property (which requires years and usually involves condemnation proceedings); preparing plans and specifications; obtaining granting agency, Building and Safety and Planning Department approvals; advertising for construction bids; awarding a construction contract; constructing the project and finally accepting the project. Each of these activities involve interaction with numerous constraints that affect architects, contractors, inspectors, other governmental agencies, interest groups, and citizens.

Over the years, the DRP has taken various steps to reduce the delays in designing and constructing capital projects. The most noteworthy is the implementation of the Contract Administration Division and the assignment of project managers to individual projects. This project manager concept is recognized as a necessary tool for the expeditious completion of construction projects. In a study of the Los Angeles Department of Water and Power (DWP) Design and Construction Division by Arthur Young and Co. in 1978, it was recommended very strongly that the DWP implement the project manager concept in their construction process.

The Contract Administration Division in the DRP administers all design and construction contracts awarded by the Department. The project managers act as the liaison between the contractor and the City to manage and coordinate all of the administrative and technical details which must be resolved during the course of the project.

Most recently, the DRP has expanded the role of project managers to include liaison with its own staff designers in order to relieve them of their administrative and nondesign

activities. This allows the DRP staff to devote full-time to design activities and will reduce the time required to design projects internally.

Each project involving design and construction undertaken in the DRP literally involves hundreds of individual steps requiring extensive coordination and years to complete. Our examination of the process followed by DRP personnel in accomplishing the complex task of acquiring parkland and designing and constructing facilities was very encouraging. We found evidence that the management and staff of the Planning and Development Branch identified steps or procedures which could be modified or eliminated to reduce the time to design and construct projects. Those items which had merit and were under the control of the DRP were implemented. For instance, in addition to project management, the DRP shortened the critical path of a project by processing certain items in parallel rather than in sequence; standardizing its application procedures for zoning approvals; starting the process of designer selection (conducting interviews) before grant contracts are executed; obtaining authority from the Council to execute certain grant contracts and amendments on previously approved projects; developing standard design programs for various types of projects (i.e., community buildings, senior citizen centers, maintenance facilities, pools); developing standard contract forms for design and construction contracts; developing and using project control and status reports and reorganizing the grants accounting function under the control of the Assistant General Manager of Planning and Development. Each of these actions has enabled projects to be completed more quickly.

The personnel in the Planning and Development Branch appear genuinely committed to the goal of creating useful, aesthetically pleasing facilities and improvements in a timely manner. This includes project managers, designers, and administrative staff involved in grants and property acquisition, as well as supervisors and managers. Unfortunately, problems, conflict, and delays endemic to development and construction projects create frustration and aggravations that detract from their efforts.

ISSUES

Grants Processing

The process of approving notices of intent, grant applications, and grant contracts can substantially delay the award of DRP design and construction contracts.

Discussion

When possible, the DRP prepares both the notice of intent and application for a grant at the same time and submits both to the Mayor and Council. Then, other City agencies review the proposal and make appropriate comments and recommendations which are reviewed by the Mayor, the Grants, Housing and Community Development Committee and the City Council. This is necessary and appropriate. If a grant is awarded to the City, the DRP must prepare and submit a new DRP Board report; that report and the contract will be reviewed by the Mayor, the Grants, Housing and Community Development Committee and staff, as well as the full Council (just as the application was reviewed). This review and approval of the grant contract, beginning with the preparation of the board report and proceeding to the eventual approval of Mayor, could require between five and ten weeks.

In almost every grant program in which the DRP participates, the project description, scope and funding amounts and requirements included in the proposed grant contract are identical to those submitted in the application.

The formal review process is appropriate in selecting projects, assigning priorities, determining the availability of matching City funds and assuring all eligible costs will be recovered. Once the project is selected and approved by the Council, however, there appears to be insufficient benefit in reviewing administrative documents to justify a delay of five to ten weeks. On a one million dollar project, a two month delay could reduce the purchasing power of the grant funds by \$20,000 or more.

In two recent grant programs, the 1976 State Bond Fund and the Urban Open Space and Recreation Program, the Council exempted the DRP from the requirement of submitting grant documents to the Council on previously approved projects and

delegated to the General Manager the authority for executing the documents. This procedure worked very well and reduced significantly the time required to process grant documents and return them to the granting agency.

The State Department of Parks and Recreation, which administers most of the City's Recreation and Parks grant projects, has informed us that the County of Los Angeles Parks and Recreation Department is processing grant documents in four or five days, whereas it takes up to ninety days for the City to process the same kinds of documents.

We believe that in those cases where the grant contract offered by the granting agency is identical to or substantially the same as the project application previously approved by the Mayor and Council, authority for executing the contract should be delegated to the General Manager of the DRP. Delegation of authority should also be given on most grant amendments proposed by the DRP. Most amendments are administrative in nature, such as time extensions, or are required by the granting agency and represent ministerial actions that do not require City Council action.

1. Recommendation (Policy)

That the Mayor and City Council:

- (a) Modify Ordinance 150,582 (Administrative Code Section 14.7) to give the Mayor and Council the discretion to allow a general manager to execute a grant agreement on behalf of the City if the approved agreement is substantially the same as that which was previously approved in the grant application; and
- (b) Authorize a general manager to submit and execute minor grant amendments such as time extensions, changes to the scope of projects resulting from deletions due to higher than anticipated construction costs, and other factors. It is suggested that these be authorized at the time the grant application is approved. (Attached as Exhibit I is the suggested modification.)

Review of Personal Services Contracts

Personal services contracts are subjected to a review by the Mayor and City Administrative Officer (CAO), Personnel Department and City Attorney in accordance with Executive Directive No. 16 and Council Resolution (C.F. 120,044). The review of such standard contracts can take up to three months and ultimately delays the award of a construction contract.

Discussion

Executive Directive No. 16 and C.F. 120,044 establish a City processing requirement which must be met prior to the execution of contracts for personal services (i.e., design and appraisal).

A review of the files indicates that no significant findings were produced from the reviews, but total time consumed was between 7 and 88 calendar days. This time is on a project's "critical path" and does delay its ultimate completion.

The staff review (Personnel and CAO) of standard contracts for architectural and appraisal services for grant funded or City funded projects is redundant. The project was initially approved as a grant or in the Five-Year Capital Program and the DRP's standard agreement has been reviewed on numerous previous occasions. The DRP should be allowed to execute personal services agreements whenever an approved project is at issue and the standard contract form is utilized.

2. Recommendation (Policy)

That the Mayor modify Executive Directive No. 16 and the Council modify its policies (in C.F. 120,044) regarding the review of personal services contracts to enable the Department of Recreation and Parks, when using a standard contract form, to contract for personal services (design, appraisal, or survey) for projects previously approved by the Mayor and City Council without a personal services contract review.

Insurance and Bonds

Many contractors building their first and even subsequent DRP projects often have difficulty and require additional time to get their insurance and bonds in a form acceptable to the City Attorney. Delays in obtaining City Attorney approval initially (before the City executes the construction contract) slow the start of construction; and problems in obtaining City Attorney approvals of insurance renewals delay progress payments.

Discussion

The City has strict requirements for bonds and insurance. Oftentimes, contractors or their insurance or bond companies fail to provide evidence of their coverage in the proper form demanded by the City Attorney. This necessitates resubmitting insurance documents until they are in the proper form. Such submittals and resubmittals occur before the

construction contract is executed by the City, delaying the commencement of construction by however long it takes for the City Attorney to approve the submittals.

The contract award letter prepared by the Board Secretary specifies that the contractor must secure the required bonds and insurance and includes, as an attachment, the City requirements and specifications. Apparently, the instructions are not read by the insurance companies, or the standard insurance company forms are thought to be sufficient. In any event, it is often necessary for a contractor to resubmit his insurance several times before it is finally approved. A savings of one to four months is possible if the recommendation below can simplify the insurance and bond approval process.

Should the insurance or bond expire before the project is completed, or should the general contractor change insurance or bond companies during the project, the new bonds must also be approved. Oftentimes, it may require several weeks or more for the documents to be approved. Until the documents are approved, progress payments will not be made.

Members of the Building Industry Association argue that the City should modify its requirements and conform to generally accepted terms and conditions for bonds and insurance in the market place. This seems reasonable to the extent that the City can be reasonably protected using standard or generally accepted documentation.

Recommendations

3. That the City Council instruct the City Attorney to present alternatives to current insurance and bond requirements that will be more consistent with generally accepted insurance industry practice. (Policy)
4. That the Department of Recreation and Parks include a statement in the award letter and the insurance expiration notice identifying its insurance coordinator (by name and telephone number) suggesting that the contractor or insurance company call before preparing or submitting insurance and bonds to avoid unnecessary complications and project delays.

Inspection

DRP projects are inspected by two City agencies - Bureau of Contract Administration and Department of Building and Safety. This dual inspection creates higher costs (because two different inspection fees must be paid) and results in conflicts due to different code and specification interpretations.

Discussion

City construction projects are inspected by inspectors from the Bureau of Contract Administration (BCA) and the Department of Building and Safety. It is the purpose of the BCA inspections to insure that what is constructed meets the requirements and specifications of the construction contract approved by the DRP. Building and Safety inspections are for code compliance. Since the DRP's building plans must be approved by plan check personnel in Building and Safety for minimum code compliance, it seems that BCA inspectors should be able to take the approved plans and inspect to insure that what is being constructed meets the requirements of the Building Code and the specifications and quality requirements of the DRP.

There could be some conflicts if a BCA inspector performs both inspections. The DRP designers could specify a change that reduces the quality of material or workmanship going into a project. The BCA inspection must then determine that the work was performed and allow the installation of the approved material or workmanship. The area of potential conflict would be if the approved material or workmanship is below the minimums allowed by the Building Code. In such a situation, could the BCA inspector reject the substandard work while also acting as the combined Building Inspector-Quality Control Inspector?

The only way this question can be objectively answered is to test the hypothesis that both inspections can be performed by one person. To do this, it is suggested that the Mayor authorize a pilot or demonstration program and instruct the Director, BCA and the General Manager, DRP to select several projects for which a qualified BCA inspector will perform both inspections, but the code inspections will be for informational purposes only. Periodically, the Bureau Director and the General Manager (or his representative) should meet and analyze the differences between the code compliance inspection performed by the Building and Safety inspector and that which resulted from the BCA "code" inspection. At the conclusion of the project, a formal meeting could be held between the BCA, Building and Safety and DRP. Subsequently, a determination could be made whether the combined inspection can be efficiently and effectively performed and what new costs, if any, are needed to implement the combined inspection program.

Some small savings will occur from not having conflicting inspector opinions delay construction and from not paying two separate inspection fees. Additionally, some time savings could be achieved as well as improving coordination and lessening contractor confusion.

5. Recommendation

That the Mayor instruct the Director of the Bureau of Contract Administration and the General Manager of the Department of Recreation and Parks jointly to test the use of a single City inspector for Department of Recreation and Parks construction projects (rather than one inspector from the Department of Building and Safety and another from the Bureau of Contract Administration); and submit a report to him covering the results of the test and related conclusions and/or recommendations.

Land Acquisition

The acquisition of land for development of recreation and park facilities is an extremely lengthy, time-consuming process.

Discussion

When the City must acquire multiple parcels under different ownership, years may pass without acquiring all of the required property. Appraisals may require many months and often must be approved by the grantor (agency funding the grant project) in advance of negotiations. Negotiations can, in some instances, move more rapidly than appraisals, but should delays occur (finding owners, discussing and negotiating with property owners' lawyers), new appraisals may be necessary to keep up with the escalating value of the property to be acquired. Often this process is aggravated and lengthened by condemnation proceedings which are unavoidable. Most of the appraisal, and all of the negotiations and relocation work, is performed by the Real Estate Division of the Bureau of Engineering.

Discussions with City Attorney and DRP representatives yielded contradictory information on how land acquisition could be expedited. There does not appear to be any way to simplify the acquisition process. Some slight time advantage may be achieved by utilizing contract appraisers and they should be used whenever the DRP thinks it will be beneficial.

The examination of the acquisition difficulties surrounding the Western/Santa Barbara Park site and the Echo Park Swimming Pool site indicates that it may be advantageous to identify potential park sites selectively and commence the acquisition process well in advance of seeking funds for the actual physical improvements. This has a significant drawback in that most grant projects will not retroactively reimburse the City for land costs that were incurred prior to the execution of the grant agreement.

Another problem occurs in setting priorities and following through with development. It has been the City's experience that after a lengthy land acquisition process, funds for development are either not available or are diverted to another acquisition effort leaving the City with land it is not able to develop. However, there appear to be recreational needs in various parts of the City that can only be met through the acquisition of land now privately owned and eventual development of new facilities on such land. Knowing that the acquisition process is exceedingly long and may require 5 to 10 years, the development of a long term land acquisition program seems necessary.

This problem is no different than that faced by the private sector. It is extremely difficult and time consuming to acquire many separately owned parcels of property for any single large development. This problem, for major redevelopment projects, has been partially solved by redevelopment agencies. Such agencies negotiate for private property and provide relocation assistance for those to be displaced; but the process is difficult and very long.

An evaluation of the step by step processes followed by the Real Estate Division of the Bureau of Engineering will be performed in the second phase of this Audit as requested in the letter from the Governmental Operations Committee dated December 22, 1980. Such issues as establishing priority for Bureau and non-Bureau originated work, sequential nature of the appraisal-relocation assistance programs, timeliness of appraisal, and others will be evaluated.

6. Recommendation

That the Department of Recreation and Parks prepare a land acquisition program for selected projects which will involve multiple parcels, and proceed with the acquisition on such projects as soon as possible.

Freeze of Design and Reuse of Plans

The DRP may hold at least one, and perhaps several, community meetings to discuss its conceptual (schematics) and preliminary plans. Depending on the project and the community, as much as three months can be consumed, thereby delaying award of the construction contract.

The time required to design new plans for each multipurpose center, community building or senior citizens center could be significantly reduced if an existing design for each type of facility could be reused.

Discussion

The DRP confers with various community groups to discuss development plans. Many projects are not controversial and do not result in delays. Others require several meetings and design changes. Such meetings delay the completion of working drawings and the award of a construction contract. Again, such delays increase ultimate construction costs.

The contact with the community is appropriate to discuss the architect's rendering and schematic representation of the development or facility. With the public's input, staff can modify or confirm its instructions to the architect within the financial limits or design constraints of the project.

Staff attempts to avoid too many or major changes because these invariably create delays and escalate both design and construction costs. For example, in the design of a pool that is now under construction, it was requested that a three-meter diving board be substituted for a one-meter board. Superficially, the change may not seem significant. The difference in cost for the board was \$2,000. However, the change required that the depth of the pool be increased from 9 feet to 12 feet. Total cost for the change is now estimated at \$42,000. Final costs could be higher.

The reuse of plans and specifications should help reduce the number of changes proposed by the community. The community will review a plan that is already in use, one determined to be functional for those using and maintaining it. Some cosmetic changes should be available (colors, exterior finishes) similar to the range of choices available to those who purchase a house in a new development.

Time required to design a new facility (from award of a design contract to receipt of final plans and specifications) varied significantly from project to project and designer to designer, but fell within the broad range of about 180 days to over 700 days. Many factors influenced the time to produce a design including designer workload, changes required due to City-required modifications, Building and Safety plan check, and the like.

DRP, under the Federally funded PWEA Program (Public Works Employment Act), with significant staff effort and diligence, was able to successfully "reuse" existing plans and specifications for completed structures, and "site-adapt" those plans to different locations so as to meet stringent time deadlines mandated in the Federal program.

The effort expended under PWEA may not be realistically expected for every (site adaption) effort. However, the time required to "site adapt" an existing design to a new location is substantially less than the time required to design new plans.

Based on our evaluation, a site adaption should shorten the design time by approximately 1/4 to 1/2 of the time required to assemble an original design, if the existing design has not been made obsolete by significant changes in the City's Building Code. Depending on the structure being designed, the architect's workload, and a host of other variables, it is estimated that approximately three to five months (and perhaps more) could be saved. Since the design time is also on a project's critical path, any reduction in design time will speed a project's award of the construction contract and fix the cost of construction.

We do not believe that the DRP designers should be forced to develop one standard plan for a community building, another for a senior citizen facility, or other improvements. Further, there should be allowances and design differences between adjoining or nearby facilities. However, to the greatest extent practical, plans and specifications should be reused until the Building Code changes, specified building components are no longer obtainable, or the basic design becomes overused or detracts from the community.

If the reuse of designs could save three to five months between the receipt of a grant and the award of a construction contract, the estimated loss from inflation could be reduced by \$30,000 to \$60,000 or more per project and reduce the design costs considerably.

7. Recommendation

That the Board of Recreation and Park Commissioners establish as a matter of policy that, as far as reasonable and practical, the Department will:

- (a) Reuse the plans and specifications for its buildings and facilities; and
- (b) Determine a "freeze point" in the design process after which elective changes should not be made.

Delays in Construction

The construction contract specifies a completion date, but often such dates are not achieved.

Discussion

Delays are an inevitable problem in construction. Design changes often occur after construction has started, errors or omissions are discovered and must be corrected, adverse weather conditions delay construction, material

shortages or other problems occur which require additional time to complete construction. However, other delays not caused by the above are not "excusable" and may, in large measure, be the result of poor general contractor scheduling; a general contractor having too much work and insufficient workforce to coordinate the work of subcontractors; or, as indicated by subcontractors and general contractors, the result of a project manager reacting too slowly.

The Department has had valuable experience with a variety of contractors. Many have performed excellently (satisfactorily finished construction ahead of schedule), some have finished on or slightly beyond the scheduled completion date, while others have required many extra months beyond the contract completion date to finish a project.

General contractor initiative and conscientiousness is an important key to timely completion of a construction project. Concerned and responsive action by project managers in DRP is also very important. A stated goal of the Planning and Development Branch is to open a facility to public use as soon as possible. Early occupancy diminishes the threat of vandalism and enables earlier use of the facility by the public.

To encourage some general contractors to be more conscientious, the DRP has increased the daily charge for liquidated damages and has recommended that the Board of Recreation and Park Commissioners (and the Board subsequently has so acted) assess liquidated damages for the unexcused delays in completing construction work. In addition, staff has also recommended, and the Board approved, cancellation of contracts with general contractors, thereby requiring the bonding company to finish the project. Ideally, project managers, to the maximum extent possible, should work with the general contractor to keep a project from falling behind schedule. This would be desirable and beneficial for the City and the subcontractors on the project. Although the assessment of liquidated damages could reduce the City's cost of construction, such assessments are after the occurrence of delays.

The staff of the DRP should continue to do everything within its ability to keep a project on schedule and should recommend, and the Board should approve, the assessment of liquidated damages in all cases where unexcused delays extend project completion. Uniform application of liquidated damages will build a strong reputation that the deadlines established by the DRP are real. General contractors who previously could "drag their feet" on a Recreation and Park project may decide not to bid knowing that they may be penalized for poor performance.

Until the Department acquires such a reputation, it should consider not awarding construction contracts to those contractors who have consistently failed to perform to the

satisfaction of the Department, even if such a contractor is submitting the low bid.

Other benefits may accrue to subcontractors. At the meeting with the Building Industry Association, subcontractors voiced strong resentment over protracted delays in the construction process. They cited problems with ordering material early in the program in anticipation of timely installation and then facing 3 to 6 months or more in delays before that material can be installed. Then it becomes necessary to bill and wait several more months before being paid by the general contractor. Such delays may require that working capital be borrowed to pay suppliers for the delivered material, storage costs to be incurred for the delivered material, and the payment of interest to finance the overall effort. Assuming that the Department could establish a reputation that construction schedules are to be met, subcontractor expenses could be minimized.

8. Recommendation

That the staff and the Board of Commissioners of the Department of Recreation and Parks:

- (a) Assess liquidated damages whenever a general contractor fails to meet the time constraints in a construction contract; and
- (b) Consider not awarding new construction contracts to general contractors who have a history of late completions.

Code Interpretation Delays

Subsequent to the approval of plans (by the Plan Checking Section of the Department of Building and Safety), project completions are sometimes delayed by individual Building and Safety inspector's personal interpretations of the code.

Discussion

Experiences recounted by designers and project managers indicate the code interpretations by individual inspectors can delay the completion of construction. This type of problem is common to both the public and private projects involving Building and Safety personnel and is therefore not unique.

The problems and delays caused by inspectors requiring changes from approved plans have caused consternation to building contractors and designers for years. If a change is proposed by a Building and Safety field inspector and the DRP

project manager believes the change is not warranted, the change should be reviewed by a plan checker in Building and Safety.

The DRP should press Building and Safety for answers whenever the staff believes that an inappropriate requirement is being demanded.

9. Recommendation

That Department of Recreation and Parks project managers routinely present inspection related problems to inspection managers or plan checkers in the Department of Building and Safety whenever it is believed that inappropriate code interpretations are being made.

EXHIBIT I

Proposed Amendment to Administrative Code

Sec. 14.7 Commitments.

No City department or office shall have the authority to make, attempt to make, or to imply any commitment to any person, agency or other entity with respect to the grants program, or to any item which is a part thereof, nor shall any purported commitment be binding upon the City, unless those documents which form the basis of a binding commitment have been approved by the City Council with the concurrence of the Mayor, or unless the City department or office has been specifically authorized to make such commitment on behalf of the City, or upon a two-thirds vote of the City Council after disapproval by the Mayor, provided, however, that in the event the Mayor fails to disapprove within 10 days after receipt of such documents, he shall be deemed to have approved the same.

